

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. Objection to the specification

This objection is rendered moot by the cancellation of claims 62 and 64. In so far as the objection may be applicable to new claims 72 and 74, reconsideration and removal of this objection is respectfully requested, on the basis that the language indicated as not having antecedent basis is supported in the specification.

In particular, the clearance of claim 72 is specifically referred to as "clearance 42" on page 12, lines 5-7 of the clean copy of the substitute specification.

Additionally, on page 12, line 29 through page 13, line 2 of the clean copy of the substitute specification, the hook-shaped profile clearance of claim 74 is specifically described as "space 46" which can be made such that there remains a hook-shaped material part.

Accordingly, antecedent basis is provided for these structures in the specification and removal of the objection to the specification is respectfully requested.

2. Drawing objection

The drawing objection is rendered moot by the cancellation of claim 63. In so far as the drawing objection may be applicable to new claim 73, it is respectfully submitted that an elastic press-on element is illustrated in the drawings (Figs. 1 and 6) in an exemplary manner by at least the resilient members 40, which are elastic and include tensile forces created therein which cause pressing against the inner wall of the attachment channel, as is described in detail on page 11, lines 4-17 of the clean copy of the substitute specification.

Accordingly, removal of the objections to the drawings is respectfully requested.

3. In the claims

A. Claim amendments

As shown in the foregoing LIST OF CURRENT CLAIMS, the claims have been amended to more clearly point out the subject matter for which protection is sought.

In the claims, previously pending claims 54-57, 59, and 62-65 have been replaced with new claims 66-75 with the correspondence of the claims as follows.

New claim	Related to Old claim
66	59
67	Common recitation in claims 54, 55, and 56
68	Characterizing part of claim 54
69	Characterizing part of claim 55
70	Characterizing part of claim 56
71	57
72	62
73	63
74	64
75	65

Additionally, claim 66 corrects the minor informality noted with respect to claim 59 and claim 68 corrects the minor informality noted with respect to claim 54. It is respectfully submitted that no new matter is added by way of the amendments since the changes merely correspond to and merge the subject matter of previously presented claims and correct minor informalities.

Further, claim 69 replaces language indicated to be indefinite with the phrase “an intersection between an edge of the panel and a theoretical line formed by the

prolongation of the first end”. It is respectfully submitted that no new matter is added since support for the amendment can be found at least on page 10, lines 5-7 of the clean copy of the substitute specification.

Further still, claim 70 replaces language indicated to be indefinite with the phrase that the insert parts are “connected to one another at an angle so that the resilient members provide for a reactive tensile force to the compression force which occurs in the side members ends and which have been created by pushing off both side members on the notch of the corner piece.” It is respectfully submitted that no new matter is added since support can be found at least on page 11, lines 5-15 of the clean copy of the substitute specification.

Additionally, claim 72 replaces language indicated to be indefinite with the phrase “a mutual interlocking between the corner piece and the side members is carried out by the locking means.” It is respectfully submitted that no new matter is added since support can be found at least on page 5, lines 12-17 of the clean copy of the substitute specification.

Turning to new claims 76-84, it is respectfully submitted that no new matter is added.

In particular, new claim 76 finds basis in originally filed claims 1 and 2 and at least on page 2, lines 2-3, page 5, lines 12-20, page 6, lines 5-7, 18-21, and 25, page 9, lines 15-17 and 19-24, page 11, lines 4-5, 9-13, 18-20, and 21-24 of the clean copy of the substitute specification.

New claim 77 finds basis at least on page 12, lines 5-7 of the clean copy of the substitute specification.

New claim 78 finds basis on previous claim 59.

New claim 79 finds basis on part of previous claim 59.

New claim 80 finds basis at least on page 5, lines 11-12, and page 8, lines 2-4 and line 26 through page 9, line 2 of the clean copy of the substitute specification.

New claim 81 finds basis at least on page 9, lines 3-4 of the clean copy of the substitute specification.

New claim 82 finds basis on previous claim 54.

New claim 83 finds basis at least on page 9, lines 28-29 of the clean copy of the substitute specification and in Fig. 4.

New claim 84 finds basis at least on page 10, lines 1-7 of the clean copy of the substitute specification and in Fig. 1.

Entry of the LIST OF CURRENT CLAIMS is respectfully requested in the next Office communication.

B. Claim objections

The objections to claims 54 and 63 are rendered moot by the cancellation of claims 54 and 63. In so far as the objections may apply to new claims 67 and 73, the word "side" is included in new claim 67 and the word "surface" has been replaced with the word "wall" in new claim 73.

Accordingly, removal of the objections to the claims is respectfully requested.

C. Rejection of claim 62 under 35 U.S.C. § 112 1st paragraph

This rejection is rendered moot by the cancellation of claim 62. In so far as the rejection may be applicable to new claim 72, it is respectfully submitted that language in question does not appear in new claim 72.

Accordingly, withdrawal of this rejection is respectfully requested.

D. Rejection of claims 55-57, 59, and 62-65 under 35 U.S.C. § 112 2nd paragraph

This rejection is rendered moot by the cancellation of claims 55-57, 59, and 62-65.

In so far as the rejection of claim 55 may be applicable to new claim 69, it is respectfully submitted that antecedent basis is provided for the panel in claim 68,

from which claim 69 depends, and that the language in question has been replaced with the phrase “the intersection between an edge of the panel and a theoretical line formed by the prolongation of the first end.”

In so far as the rejection of claim 56 may be applicable to new claim 70, it is respectfully submitted that the language in question has been replaced with the following, the insert parts are “connected to one another at an angle so that the resilient members provide for a reactive tensile force to the compression force which occurs in the side members ends and which have been created by pushing off both side members on the notch of the corner piece.”

In so far as the rejection of claim 59 may be applicable to new claim 66, it is respectfully submitted that claim 66 refers to “notches defined on the corner piece; wherein each insert part includes at least one of said notches defined on the corner piece, said at least one notch comprising;” in order to clarify that the at least one notch on each insert part is one of the notches on the corner piece.

In so far as the rejection of claim 63 may be applicable to new claim 73, it is respectfully submitted that claim 73 refers to the “corner piece” and not the corner part.

Accordingly, withdrawal of this rejection is respectfully requested.

4. Rejection of claims 54 and 55 under 35 U.S.C. § 103(a) as being unpatentable over EP publication no. 835,978 (Schulz) in view of EP publication no. 412,669 (Rhodes)

This rejection is rendered moot by the cancellation of claims 54 and 55.

Accordingly, withdrawal of this rejection is respectfully requested.

5. Rejection of claims 56, 57, 62, 63, and 65 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 3,627,359 (Paul) in view of EP publication no. 835,978 (Schulz)

This rejection is rendered moot by the cancellation of claims 56, 57, 62, 63, and 65.

Accordingly, withdrawal of this rejection is respectfully requested.

6. Rejection of claim 64 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 3,627,359 (Paul) in view of EP publication no. 835,978 (Schulz) and further in view of U.S. patent no. 5,378,077 (Paulsen)

This rejection is rendered moot by the cancellation of claim 64.

Accordingly, withdrawal of this rejection is respectfully requested.

7. Allowable subject matter

The applicant gratefully acknowledges the indication that claim 59 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, 2nd paragraph. Accordingly, claim 59 has been rewritten as new claim 66 and to overcome the rejection under 35 U.S.C. § 112, 2nd paragraph, and allowance of claim 66 is respectfully requested.

Since independent claim 66 is considered to be patentable, claims 67-75, which depend from claim 66, are also considered to be patentable as containing all of the elements of claim 66, as well as for their respective recited features.

8. New claims 76-84

For the reasons discussed below, it is respectfully submitted that new claims 76-84 are considered to be patentable over the prior art of record.

New claim 76 provides an embodiment of a corner joint with two frame side members having attachment channels and mitered end portions, and at least one corner piece having two insert parts joined at connecting ends and positioned relative to one another at a predetermined angle. Each of the insert parts is configured to be

received by the mitered end portions of a respective one of the attachment channels. The attachment channels are confined by an inner wall and an outer wall. A mutual interlocking between the corner piece and the side members is achieved via a locking means which are formed of lips defined by a pressed-in material part of the outer wall.

The locking means thus generate a pre-stress in the form of pressure on both side members and tension in the corner piece, where the locking means comprise material parts which are upset by compressing the material. The upsetting has a useful working force on the total mitre, wherein a compression force is created in the side members ends by pushing off both sides members on the locking means.

The corner piece is equipped with inclined parts that define a pressure zone between the locking means and a place on the inner wall that is situated deeper in the attachment channels, so that there can be a pressure increase between the place and the locking means.

The insert parts are equipped with resilient members that are connected to one another at an angle. The inclined parts of the corner piece are connected to the accompanying free end of the resilient member. Thus, the inclined parts form means to create a tensile force in the resilient members, since pressure in the inclined parts results in tension in the resilient members. The tensile forces in the resilient members results in pressure forces in the outer and inner walls and therefore contributes to the rigidity and pre-stress of the obtained mitre as a whole.

Additional features of the embodiment are recited in claims 77-84, which depend from new claim 76. Particular features of the dependent claims are as follows. No material is present on the outside corner of the corner piece. The locking means is described as being a lip and notch having a special triangular form. The notch is described as having a buckled shape. Stop parts are provided behind the lips. The stop parts are provided with serrations. The insert parts are of triangular form. The inclined part that allows a pressure increase between the locking means and the inner wall is formed as part of the first leg of the triangle. The prolongation of the inclined part extends to the middle of the supporting wedges.

It is respectfully submitted that these combinations of features and the resulting improvements in the rigidity and pre-stress of the obtained mitre as a whole are not disclosed in the prior art of record.

The advantages of this configuration are numerous. One advantage of this configuration is that significant tension can be created in the corner piece by upsetting the material of the lip during a pressing-in of the lip for cooperation with a notch in the corner piece. Another advantage is that the corner piece is essentially only in contact at the inner sides of the side members, so that the corner joint provides a pre-stress in the side members to aid with maintaining the side members together. Yet another advantage is the optimized positioning of the different legs of the insert parts with regard to one another and with regard to the panel to be supported in order to enhance the effectiveness and the transmission of the created pre-stress. Additional advantages are found via the pressing enhancement measures by means of the stop parts that are detached from the remaining structure and in securing measures in the form of a serration on the stop part that aids with maintaining the lip always in contact with the stop part, for example, by use of a locking paste.

A simplified drawing (Appendix A) of how the pressing in of the lips functions to create the tension and pre-stress in the corner piece and the side members is attached hereto for review. In the drawing, the lips are represented by the little men. As represented in the top figure, when the lips are not pressed in, the knees of the little men are bent, and no force is applied by their legs to the insert parts of the corner piece.

As shown in the lower figure, as represented by the straightening of the knees of the little men, when the lips are pressed in, a force is applied to the insert parts of the corner piece, which force is transmitted to create a pre-stress in the side members. The forces and pre-stress are represented by the arrows in the lower figure.

In view of the above discussion of the features and functions of the embodiments of new claims 76-84, it is respectfully submitted that the prior art of

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record fails to disclose these combinations of features and functions. Accordingly, claims 76-84 are considered to be patentable.

9. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicant's attorney, the examiner is invited to contact the undersigned at the numbers shown below.

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Respectfully submitted,



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APPENDIX A

